



Sequence Listing.txt
SEQUENCE LISTING

#3
RECEIVED
OCT 02 2001
TECH CENTER 1600/2900

<110> Novartis Inc.

<120> Methods and Compositions for Controlling Pathological and Prepro-
thological
Protein Assembly or Aggregation

<130> 42108/26146

<140> 09/904,987

<141> 2001-07-12

<160> 7

<170> PatentIn version 3.0

<210> 1

<211> 43

<212> PRT

<213> homo sapiens

<300>

<308> NCBI ENTREZ / QRHUA4

<309> 2000-09-15

<313> (672)..(714)

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Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15

Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
20 25 30

Gly Leu Met Val Gly Gly Val Val Ile Ala Thr
35 40

<210> 2

<211> 770

<212> PRT

<213> homo sapiens

<300>

<308> NCBI ENTREZ / QRHUA4

<309> 2000-09-15

<313> (1)..(770)

Sequence Listing.txt

<400> 2

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Met Leu Pro Gly Leu Ala Leu Leu Leu Leu Ala Ala Trp Thr Ala Arg
1          5          10          15
Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro
          20          25          30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
          35          40          45
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
          50          55          60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65          70          75          80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
          85          90          95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
          100          105          110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
          115          120          125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
          130          135          140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145          150          155          160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
          165          170          175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
          180          185          190
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
          195          200          205
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
          210          215          220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225          230          235          240
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu

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255

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500

505

510

Glu His Val Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser
 515 520 525

Gln Val Met Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser
 530 535 540

Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp
 545 550 555 560

Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val
 565 570 575

Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala
 580 585 590

Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro
 595 600 605

Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe
 610 615 620

Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val
 625 630 635 640

Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser
 645 650 655

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp
 660 665 670

Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu
 675 680 685

Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
 690 695 700

Leu Met Val Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu
 705 710 715 720

Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val
 725 730 735

Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met
 740 745 750

Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met

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755

760

765

Gln Asn

770

<210> 3

<211> 253

<212> PRT

<213> homo sapiens

<300>

<308> NCBI ENTREZ / XM_009567

<309> 2001-04-17

<313> (1)..(253)

<400> 3

Met Ala Asn Leu Gly Cys Trp Met Leu Val Leu Phe Val Ala Thr Trp
1 5 10 15

Ser Asp Leu Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
20 25 30

Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
35 40 45

Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
50 55 60

Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
65 70 75 80

Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His
85 90 95

Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met
100 105 110

Ala Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr
115 120 125

Met Leu Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp
130 135 140

Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln
145 150 155 160

Val Tyr Tyr Arg Pro Met Asp Glu Tyr Ser Asn Gln Asn Asn Phe Val

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165

170

175

His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr
 180 185 190
 Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg
 195 200 205
 Val Val Glu Gln Met Cys Ile Thr Gln Tyr Glu Arg Glu Ser Gln Ala
 210 215 220
 Tyr Tyr Gln Arg Gly Ser Ser Met Val Leu Phe Ser Ser Pro Pro Val
 225 230 235 240
 Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
 245 250

<210> 4
 <211> 140
 <212> PRT
 <213> homo sapiens

<300>
 <308> NCBI ENTREZ / XM_003494
 <309> 2001-04-16
 <313> (1)..(140)

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Met Asp Val Phe Met Lys Gly Leu Ser Lys Ala Lys Glu Gly Val Val
 1 5 10 15
 Ala Ala Ala Glu Lys Thr Lys Gln Gly Val Ala Glu Ala Ala Gly Lys
 20 25 30
 Thr Lys Glu Gly Val Leu Tyr Val Gly Ser Lys Thr Lys Glu Gly Val
 35 40 45
 Val His Gly Val Ala Thr Val Ala Glu Lys Thr Lys Glu Gln Val Thr
 50 55 60
 Asn Val Gly Gly Ala Val Val Thr Gly Val Thr Ala Val Ala Gln Lys
 65 70 75 80
 Thr Val Glu Gly Ala Gly Ser Ile Ala Ala Thr Gly Phe Val Lys
 85 90 95
 Lys Asp Gln Leu Gly Lys Asn Glu Glu Gly Ala Pro Gln Glu Gly Ile

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100                               105                               110
Leu Glu Asp Met Pro Val Asp Pro Asp Asn Glu Ala Tyr Glu Met Pro
    115                               120                               125

Ser Glu Glu Gly Tyr Gln Asp Tyr Glu Pro Glu Ala
    130                               135                               140

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<213> homo sapiens

<300>
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<309> 2001-02-13
<313> (1)..(758)

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Met Ala Glu Pro Arg Gln Glu Phe Glu Val Met Glu Asp His Ala Gly
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Thr Tyr Gly Leu Gly Asp Arg Lys Asp Gln Gly Gly Tyr Thr Met His
    20                               25                               30

Gln Asp Gln Glu Gly Asp Thr Asp Ala Gly Leu Lys Glu Ser Pro Leu
    35                               40                               45

Gln Thr Pro Thr Glu Asp Gly Ser Glu Glu Pro Gly Ser Glu Thr Ser
    50                               55                               60

Asp Ala Lys Ser Thr Pro Thr Ala Glu Asp Val Thr Ala Pro Leu Val
65                               70                               75                               80

Asp Glu Gly Ala Pro Gly Lys Gln Ala Ala Ala Gln Pro His Thr Glu
    85                               90                               95

Ile Pro Glu Gly Thr Thr Ala Glu Glu Ala Gly Ile Gly Asp Thr Pro
    100                              105                              110

Ser Leu Glu Asp Glu Ala Ala Gly His Val Thr Gln Glu Pro Glu Ser
    115                              120                              125

Gly Lys Val Val Gln Glu Gly Phe Leu Arg Glu Pro Gly Pro Pro Gly
    130                              135                              140

Leu Ser His Gln Leu Met Ser Gly Met Pro Gly Ala Pro Leu Leu Pro

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145					150					155					160
Glu	Gly	Pro	Arg	Glu	Ala	Thr	Arg	Gln	Pro	Ser	Gly	Thr	Gly	Pro	Glu
				165					170					175	
Asp	Thr	Glu	Gly	Gly	Arg	His	Ala	Pro	Glu	Leu	Leu	Lys	His	Gln	Leu
			180					185					190		
Leu	Gly	Asp	Leu	His	Gln	Glu	Gly	Pro	Pro	Leu	Lys	Gly	Ala	Gly	Gly
		195					200					205			
Lys	Glu	Arg	Pro	Gly	Ser	Lys	Glu	Glu	Val	Asp	Glu	Asp	Arg	Asp	Val
	210					215					220				
Asp	Glu	Ser	Ser	Pro	Gln	Asp	Ser	Pro	Pro	Ser	Lys	Ala	Ser	Pro	Ala
225					230					235					240
Gln	Asp	Gly	Arg	Pro	Pro	Gln	Thr	Ala	Ala	Arg	Glu	Ala	Thr	Ser	Ile
				245					250					255	
Pro	Gly	Phe	Pro	Ala	Glu	Gly	Ala	Ile	Pro	Leu	Pro	Val	Asp	Phe	Leu
			260					265					270		
Ser	Lys	Val	Ser	Thr	Glu	Ile	Pro	Ala	Ser	Glu	Pro	Asp	Gly	Pro	Ser
		275					280					285			
Val	Gly	Arg	Ala	Lys	Gly	Gln	Asp	Ala	Pro	Leu	Glu	Phe	Thr	Phe	His
	290					295					300				
Val	Glu	Ile	Thr	Pro	Asn	Val	Gln	Lys	Glu	Gln	Ala	His	Ser	Glu	Glu
305					310					315					320
His	Leu	Gly	Arg	Ala	Ala	Phe	Pro	Gly	Ala	Pro	Gly	Glu	Gly	Pro	Glu
				325					330					335	
Ala	Arg	Gly	Pro	Ser	Leu	Gly	Glu	Asp	Thr	Lys	Glu	Ala	Asp	Leu	Pro
			340					345					350		
Glu	Pro	Ser	Glu	Lys	Gln	Pro	Ala	Ala	Ala	Pro	Arg	Gly	Lys	Pro	Val
		355					360					365			
Ser	Arg	Val	Pro	Gln	Leu	Lys	Ala	Arg	Met	Val	Ser	Lys	Ser	Lys	Asp
	370					375					380				
Gly	Thr	Gly	Ser	Asp	Asp	Lys	Lys	Ala	Lys	Thr	Ser	Thr	Arg	Ser	Ser
385					390					395					400
Ala	Lys	Thr	Leu	Lys	Asn	Arg	Pro	Cys	Leu	Ser	Pro	Lys	Leu	Pro	Thr

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405

410

415

Pro	Gly	Ser	Ser	Asp	Pro	Leu	Ile	Gln	Pro	Ser	Ser	Pro	Ala	Val	Cys
			420					425					430		
Pro	Glu	Pro	Pro	Ser	Ser	Pro	Lys	His	Val	Ser	Ser	Val	Thr	Ser	Arg
		435					440					445			
Thr	Gly	Ser	Ser	Gly	Ala	Lys	Glu	Met	Lys	Leu	Lys	Gly	Ala	Asp	Gly
	450					455					460				
Lys	Thr	Lys	Ile	Ala	Thr	Pro	Arg	Gly	Ala	Ala	Pro	Pro	Gly	Gln	Lys
465					470					475					480
Gly	Gln	Ala	Asn	Ala	Thr	Arg	Ile	Pro	Ala	Lys	Thr	Pro	Pro	Ala	Pro
				485					490					495	
Lys	Thr	Pro	Pro	Ser	Ser	Gly	Glu	Pro	Pro	Lys	Ser	Gly	Asp	Arg	Ser
			500					505					510		
Gly	Tyr	Ser	Ser	Pro	Gly	Ser	Pro	Gly	Thr	Pro	Gly	Ser	Arg	Ser	Arg
		515					520					525			
Thr	Pro	Ser	Leu	Pro	Thr	Pro	Pro	Thr	Arg	Glu	Pro	Lys	Lys	Val	Ala
	530					535					540				
Val	Val	Arg	Thr	Pro	Pro	Lys	Ser	Pro	Ser	Ser	Ala	Lys	Ser	Arg	Leu
545					550					555					560
Gln	Thr	Ala	Pro	Val	Pro	Met	Pro	Asp	Leu	Lys	Asn	Val	Lys	Ser	Lys
				565					570					575	
Ile	Gly	Ser	Thr	Glu	Asn	Leu	Lys	His	Gln	Pro	Gly	Gly	Gly	Lys	Val
			580					585					590		
Gln	Ile	Ile	Asn	Lys	Lys	Leu	Asp	Leu	Ser	Asn	Val	Gln	Ser	Lys	Cys
		595					600					605			
Gly	Ser	Lys	Asp	Asn	Ile	Lys	His	Val	Pro	Gly	Gly	Gly	Ser	Val	Gln
	610					615					620				
Ile	Val	Tyr	Lys	Pro	Val	Asp	Leu	Ser	Lys	Val	Thr	Ser	Lys	Cys	Gly
625					630					635					640
Ser	Leu	Gly	Asn	Ile	His	His	Lys	Pro	Gly	Gly	Gly	Gln	Val	Glu	Val
				645					650					655	
Lys	Ser	Glu	Lys	Leu	Asp	Phe	Lys	Asp	Arg	Val	Gln	Ser	Lys	Ile	Gly

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660	665	670
Ser Leu Asp Asn Ile Thr His Val Pro Gly Gly Gly Asn Lys Lys Ile		
675	680	685
Glu Thr His Lys Leu Thr Phe Arg Glu Asn Ala Lys Ala Lys Thr Asp		
690	695	700
His Gly Ala Glu Ile Val Tyr Lys Ser Pro Val Val Ser Gly Asp Thr		
705	710	715
Ser Pro Arg His Leu Ser Asn Val Ser Ser Thr Gly Ser Ile Asp Met		
725	730	735
Val Asp Ser Pro Gln Leu Ala Thr Leu Ala Asp Glu Val Ser Ala Ser		
740	745	750
Leu Ala Lys Gln Gly Leu		
755		

<210> 6
 <211> 154
 <212> PRT
 <213> homo sapiens

<300>
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 <309> 2000-05-30
 <313> (1)..(154)

<400> 6

Met Ala Thr Lys Ala Val Cys Val Leu Lys Gly Asp Gly Pro Val Gln	
1	15
Gly Ile Ile Asn Phe Glu Gln Lys Glu Ser Asn Gly Pro Val Lys Val	
20	30
Trp Gly Ser Ile Lys Gly Leu Thr Glu Gly Leu His Gly Phe His Val	
35	45
His Glu Phe Gly Asp Asn Thr Ala Gly Cys Thr Ser Ala Gly Pro His	
50	60
Phe Asn Pro Leu Ser Arg Lys His Gly Gly Pro Lys Asp Glu Glu Arg	
65	75
His Val Gly Asp Leu Gly Asn Val Thr Ala Asp Lys Asp Gly Val Ala	

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85

90

95

Asp Val Ser Ile Glu Asp Ser Val Ile Ser Leu Ser Gly Asp His Cys
 100 105 110

Ile Ile Gly Arg Thr Leu Val Val His Glu Lys Ala Asp Asp Leu Gly
 115 120 125

Lys Gly Gly Asn Glu Glu Ser Thr Lys Thr Gly Asn Ala Gly Ser Arg
 130 135 140

Leu Ala Cys Gly Val Ile Gly Ile Ala Gln
 145 150

<210> 7

<211> 1543

<212> PRT

<213> homo sapiens

<300>

<308> NCBI ENTREZ / XP_003405

<309> 2001-04-16

<313> (1)..(1543)

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Met Ala Thr Leu Glu Lys Leu Met Lys Ala Phe Glu Ser Leu Lys Ser
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Phe Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
 20 25 30

Gln Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro
 35 40 45

Gln Leu Pro Gln Pro Pro Pro Gln Ala Gln Pro Leu Leu Pro Gln Pro
 50 55 60

Gln Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro Gly Pro Ala Val Ala
 65 70 75 80

Glu Glu Pro Leu His Arg Pro Lys Lys Glu Leu Ser Ala Thr Lys Lys
 85 90 95

Asp Arg Val Asn His Cys Leu Thr Ile Cys Glu Asn Ile Val Ala Gln
 100 105 110

Ser Val Arg Asn Ser Pro Glu Phe Gln Lys Leu Leu Gly Ile Ala Met

Sequence Listing.txt

115	120	125
Glu Leu Phe Leu Leu Cys Ser Asp Asp Ala Glu Ser Asp Val Arg Met 130 135 140		
Val Ala Asp Glu Cys Leu Asn Lys Val Ile Lys Ala Leu Met Asp Ser 145 150 155 160		
Asn Leu Pro Arg Leu Gln Leu Glu Leu Tyr Lys Glu Ile Lys Lys Asn 165 170 175		
Gly Ala Pro Arg Ser Leu Arg Ala Ala Leu Trp Arg Phe Ala Glu Leu 180 185 190		
Ala His Leu Val Arg Pro Gln Lys Cys Arg Pro Tyr Leu Val Asn Leu 195 200 205		
Leu Pro Cys Leu Thr Arg Thr Ser Lys Arg Pro Glu Glu Ser Val Gln 210 215 220		
Glu Thr Leu Ala Ala Ala Val Pro Lys Ile Met Ala Ser Phe Gly Asn 225 230 235 240		
Phe Ala Asn Asp Asn Glu Ile Lys Val Leu Leu Lys Ala Phe Ile Ala 245 250 255		
Asn Leu Lys Ser Ser Ser Pro Thr Ile Arg Arg Thr Ala Ala Gly Ser 260 265 270		
Ala Val Ser Ile Cys Gln His Ser Arg Arg Thr Gln Tyr Phe Tyr Ser 275 280 285		
Trp Leu Leu Asn Val Leu Leu Gly Leu Leu Val Pro Val Glu Asp Glu 290 295 300		
His Ser Thr Leu Leu Ile Leu Gly Val Leu Leu Thr Leu Arg Tyr Leu 305 310 315 320		
Val Pro Leu Leu Gln Gln Gln Val Lys Asp Thr Ser Leu Lys Gly Ser 325 330 335		
Phe Gly Val Thr Arg Lys Glu Met Glu Val Ser Pro Ser Ala Glu Gln 340 345 350		
Leu Val Gln Val Tyr Glu Leu Thr Leu His His Thr Gln His Gln Asp 355 360 365		
His Asn Val Val Thr Gly Ala Leu Glu Leu Leu Gln Gln Leu Phe Arg		

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370		375		380
Thr 385	Pro	Pro	Pro	Glu 390
	Leu	Leu	Gln	Thr
	Leu	Thr	Ala	Val
	Gly	Gly	Ile	
Gly	Gln	Leu	Thr	Ala
	Ala	Lys	Glu	Glu
			Ser	Gly
				Arg
			Ser	Arg
				Ser
Gly	Ser	Ile	Val	Glu
				Leu
				Ile
				Ala
				Gly
				Gly
				Gly
				Ser
				Ser
				Cys
				Ser
				Pro
Val	Leu	Ser	Arg	Lys
				Gln
				Lys
				Gly
				Lys
				Val
				Leu
				Leu
				Gly
				Glu
				Glu
				Glu
Ala	Leu	Glu	Asp	Asp
				Ser
				Glu
				Ser
				Arg
				Ser
				Asp
				Val
				Ser
				Ser
				Ser
				Ala
Leu	Thr	Ala	Ser	Val
				Lys
				Asp
				Glu
				Ile
				Ser
				Gly
				Glu
				Leu
				Ala
				Ala
				Ser
Ser	Gly	Val	Ser	Thr
				Pro
				Gly
				Ser
				Ala
				Gly
				His
				Asp
				Ile
				Ile
				Thr
				Glu
Gln	Pro	Arg	Ser	Gln
				His
				Thr
				Leu
				Gln
				Ala
				Asp
				Ser
				Val
				Asp
				Leu
				Ala
Ser	Cys	Asp	Leu	Thr
				Ser
				Ser
				Ala
				Thr
				Asp
				Gly
				Asp
				Glu
				Glu
				Asp
				Ile
Leu	Ser	His	Ser	Ser
				Gln
				Val
				Ser
				Ala
				Val
				Pro
				Ser
				Asp
				Pro
				Ala
Met	Asp	Leu	Asn	Asp
				Gly
				Thr
				Gln
				Ala
				Ser
				Ser
				Pro
				Ile
				Ser
				Asp
				Ser
Ser	Gln	Thr	Thr	Thr
				Glu
				Gly
				Pro
				Asp
				Ser
				Ala
				Val
				Thr
				Pro
				Ser
				Asp
Ser	Ser	Glu	Ile	Val
				Leu
				Asp
				Gly
				Thr
				Asp
				Asn
				Gln
				Tyr
				Leu
				Gly
				Leu
Gln	Ile	Gly	Gln	Pro
				Gln
				Asp
				Glu
				Asp
				Glu
				Glu
				Ala
				Thr
				Gly
				Ile
				Leu
Pro	Asp	Glu	Ala	Ser
				Glu
				Ala
				Phe
				Arg
				Asn
				Ser
				Ser
				Met
				Ala
				Leu
				Gln
Gln	Ala	His	Leu	Leu
				Lys
				Asn
				Met
				Ser
				His
				Cys
				Arg
				Gln
				Pro
				Ser
				Asp

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625					630					635					640
Ser	Ser	Val	Asp	Lys	Phe	Val	Leu	Arg	Asp	Glu	Ala	Thr	Glu	Pro	Gly
				645					650					655	
Asp	Gln	Glu	Asn	Lys	Pro	Cys	Arg	Ile	Lys	Gly	Asp	Ile	Gly	Gln	Ser
			660					665					670		
Thr	Asp	Asp	Asp	Ser	Ala	Pro	Leu	Val	His	Cys	Val	Arg	Leu	Leu	Ser
		675					680					685			
Ala	Ser	Phe	Leu	Leu	Thr	Gly	Gly	Lys	Asn	Val	Leu	Val	Pro	Asp	Arg
	690					695					700				
Asp	Val	Arg	Val	Ser	Val	Lys	Ala	Leu	Ala	Leu	Ser	Cys	Val	Gly	Ala
705					710					715					720
Ala	Val	Ala	Leu	His	Pro	Glu	Ser	Phe	Phe	Ser	Lys	Leu	Tyr	Lys	Val
				725					730					735	
Pro	Leu	Asp	Thr	Thr	Glu	Tyr	Pro	Glu	Glu	Gln	Tyr	Val	Ser	Asp	Ile
			740					745					750		
Leu	Asn	Tyr	Ile	Asp	His	Gly	Asp	Pro	Gln	Val	Arg	Gly	Ala	Thr	Ala
		755					760					765			
Ile	Leu	Cys	Gly	Thr	Leu	Ile	Cys	Ser	Ile	Leu	Ser	Arg	Ser	Arg	Phe
	770					775					780				
His	Val	Gly	Asp	Trp	Met	Gly	Thr	Ile	Arg	Thr	Leu	Thr	Gly	Asn	Thr
785					790					795					800
Phe	Ser	Leu	Ala	Asp	Cys	Ile	Pro	Leu	Leu	Arg	Lys	Thr	Leu	Lys	Asp
				805					810					815	
Glu	Ser	Ser	Val	Thr	Cys	Lys	Leu	Ala	Cys	Thr	Ala	Val	Arg	Asn	Cys
			820					825					830		
Val	Met	Ser	Leu	Cys	Ser	Ser	Ser	Tyr	Ser	Glu	Leu	Gly	Leu	Gln	Leu
		835					840					845			
Ile	Ile	Asp	Val	Leu	Thr	Leu	Arg	Asn	Ser	Ser	Tyr	Trp	Leu	Val	Arg
	850					855					860				
Thr	Glu	Leu	Leu	Glu	Thr	Leu	Ala	Glu	Ile	Asp	Phe	Arg	Leu	Val	Ser
865					870					875					880
Phe	Leu	Glu	Ala	Lys	Ala	Glu	Asn	Leu	His	Arg	Gly	Ala	His	His	Tyr

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885

890

895

Thr	Gly	Leu	Leu	Lys	Leu	Gln	Glu	Arg	Val	Leu	Asn	Asn	Val	Val	Ile
		900						905					910		
His	Leu	Leu	Gly	Asp	Glu	Asp	Pro	Arg	Val	Arg	His	Val	Ala	Ala	Ala
	915						920					925			
Ser	Leu	Ile	Arg	Leu	Val	Pro	Lys	Leu	Phe	Tyr	Lys	Cys	Asp	Gln	Gly
	930					935					940				
Gln	Ala	Asp	Pro	Val	Val	Ala	Val	Ala	Arg	Asp	Gln	Ser	Ser	Val	Tyr
945				950						955					960
Leu	Lys	Leu	Leu	Met	His	Glu	Thr	Gln	Pro	Pro	Ser	His	Phe	Ser	Val
				965					970					975	
Ser	Thr	Ile	Thr	Arg	Ile	Tyr	Arg	Gly	Tyr	Asn	Leu	Leu	Pro	Ser	Ile
		980						985					990		
Thr	Asp	Val	Thr	Met	Glu	Asn	Asn	Leu	Ser	Arg	Val	Ile	Ala	Ala	Val
	995						1000						1005		
Ser	His	Glu	Leu	Ile	Thr	Ser	Thr	Thr	Arg	Ala	Leu	Thr	Phe	Gly	
	1010					1015					1020				
Cys	Cys	Glu	Ala	Leu	Cys	Leu	Leu	Ser	Thr	Ala	Phe	Pro	Val	Cys	
	1025					1030					1035				
Ile	Trp	Ser	Leu	Gly	Trp	His	Cys	Gly	Val	Pro	Pro	Leu	Ser	Ala	
	1040					1045					1050				
Ser	Asp	Glu	Ser	Arg	Lys	Ser	Cys	Thr	Val	Gly	Met	Ala	Thr	Met	
	1055					1060					1065				
Ile	Leu	Thr	Leu	Leu	Ser	Ser	Ala	Trp	Phe	Pro	Leu	Asp	Leu	Ser	
	1070					1075					1080				
Ala	His	Gln	Asp	Ala	Leu	Ile	Leu	Ala	Gly	Asn	Leu	Leu	Ala	Ala	
	1085					1090					1095				
Ser	Ala	Pro	Lys	Ser	Leu	Arg	Ser	Ser	Trp	Ala	Ser	Glu	Glu	Glu	
	1100					1105					1110				
Ala	Asn	Pro	Ala	Ala	Thr	Lys	Gln	Glu	Glu	Val	Trp	Pro	Ala	Leu	
	1115					1120					1125				
Gly	Asp	Arg	Ala	Leu	Val	Pro	Met	Val	Glu	Gln	Leu	Phe	Ser	His	

Sequence Listing.txt

1130		1135		1140
Leu 1145	Leu Lys Val Ile Asn	Ile 1150	Cys Ala His Val	Leu 1155 Asp Asp Val
Ala 1160	Pro Gly Pro Ala Ile	Lys 1165	Ala Ala Leu Pro	Ser 1170 Leu Thr Asn
Pro 1175	Pro Ser Leu Ser Pro	Ile 1180	Arg Arg Lys Gly	Lys 1185 Glu Lys Glu
Pro 1190	Gly Glu Gln Ala Ser	Val 1195	Pro Leu Ser Pro	Lys 1200 Lys Gly Ser
Glu 1205	Ala Ser Ala Ala Ser	Arg 1210	Gln Ser Asp Thr	Ser 1215 Gly Pro Val
Thr 1220	Thr Ser Lys Ser Ser	Ser 1225	Leu Gly Ser Phe	Tyr 1230 His Leu Pro
Ser 1235	Tyr Leu Lys Leu His	Asp 1240	Val Leu Lys Ala	Thr 1245 His Ala Asn
Tyr 1250	Lys Val Thr Leu Asp	Leu 1255	Gln Asn Ser Thr	Glu 1260 Lys Phe Gly
Gly 1265	Phe Leu Arg Ser Ala	Leu 1270	Asp Val Leu Ser	Gln 1275 Ile Leu Glu
Leu 1280	Ala Thr Leu Gln Asp	Ile 1285	Gly Lys Cys Val	Glu 1290 Glu Ile Leu
Gly 1295	Tyr Leu Lys Ser Cys	Phe 1300	Ser Arg Glu Pro	Met 1305 Met Ala Thr
Val 1310	Cys Val Gln Gln Leu	Leu 1315	Lys Thr Leu Phe	Gly 1320 Thr Asn Leu
Ala 1325	Ser Gln Phe Asp Gly	Leu 1330	Ser Ser Asn Pro	Ser 1335 Lys Ser Gln
Gly 1340	Arg Ala Gln Arg Leu	Gly 1345	Ser Ser Ser Val	Arg 1350 Pro Gly Leu
Tyr 1355	His Tyr Cys Phe Met	Ala 1360	Pro Tyr Thr His	Phe 1365 Thr Gln Ala
Leu	Ala Asp Ala Ser Leu Arg	Asn	Met Val Gln Ala	Glu Gln Glu

1370

1380

Ser Pro Gln Pro Tyr Arg Leu Cys Ser Pro
1535 1540